

Notice of Allowability

Application No.

09/998,329

Examiner

Michael J. Yigdoll

Applicant(s)

HUNTER ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's submission filed on November 3, 2005.
2. ☒ The allowed claim(s) is/are 2-6 and 13-17 (renumbered 1-10).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

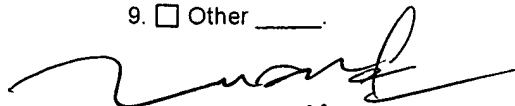
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____


TUAN DAM
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

1. This Office action is in response to Applicant's submission filed on November 3, 2005. Claim 7 is canceled and claim 16 is amended. Claims 2-6 and 13-17 are now pending.

Response to Amendment

2. The rejection of claims 16 and 17 under 35 U.S.C. 112, second paragraph, is withdrawn in view of Applicant's amendment.
3. The rejection of claim 7 under 35 U.S.C. 103(a) is withdrawn in view of its cancellation.

Oath/Declaration

4. The new oath or declaration filed on November 3, 2005 is acknowledged. The oath or declaration is no longer held defective.

Allowable Subject Matter

5. Claims 2-6 and 13-17 are allowed.
6. A statement of reasons for the indication of allowable subject matter was set forth in the final Office action mailed on September 7, 2005, and is augmented here as an examiner's statement of reasons for allowance:

The prior art of record does not expressly teach a software development method for debugging software on a target system having a plurality of processors configured with shared memory, or a method for transparently maintaining cache coherency when debugging a multiple processor system with common shared instruction memory, comprising the exact steps and limitations recited in the claims.

Specifically, the prior art of record does not teach activating a first debug session associated with a first processor and a second debug session associated with a second processor combined with the steps of (a) detecting a write request to a shared memory location by the first debug session, (b) selecting the first processor to perform the write request if the first processor associated with the first debug session has write access to the shared memory location, otherwise (c) searching a software memory map to determine if the second processor has write access to the shared memory location and selecting the second processor to perform the write request, and (d) passing the write request initiated by the first debug session to the selected processor for execution, as recited in independent claim 2.

Additionally, the prior art of record does not teach activating a first debug session associated with a first processor and a second debug session associated with a second processor combined with the steps of (a) detecting a write request to a shared memory location by the first debug session, (b) passing the write request to the first processor for execution, (c) searching a software memory map for a plurality of processors that have read access to the shared memory location, (d) broadcasting the write request to the plurality of processors, and (e) performing cache coherency updates in response to the write request in each of the plurality of processors, as recited in independent claim 13.

Similarly, the prior art of record does not teach (1) selecting a first processor to perform a write request if the first processor associated with a first debug session has write access to a shared memory location, otherwise (2) searching a software memory map to determine if a second processor has write access to the shared memory location and selecting the second processor to perform the write request, combined with the steps of (a) passing the write request

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initiated by the first debug session to the selected processor for execution, (b) searching a software memory map for a plurality of processors that have read access to the shared memory location, (c) broadcasting the write request to the plurality of processors, and (d) performing cache coherency updates in response to the write request in each of the plurality of processors, as recited in independent claim 16.

7. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

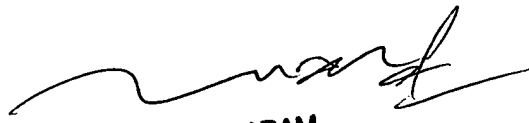
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Michael J. Yigdall
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Art Unit 2192

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